Chronic Kidney Disease and Disasters: What May the Societies Do?

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Patients with ESRD live in a complex medicosocial milieu, composed in part of nephrologists, physicians, nurses, dieticians, technicians, social workers, and custodial personnel, as well as family, friends, or neighbors. To add to the complexity, patients with ESRD must interface with local and federal governmental and insurance and large dialysis organizations (1). Patients who have ESRD and are treated with dialysis are utterly dependent on peritoneal dialysis or hemodialysis techniques for survival. For these patients, water distribution systems, ground deliveries, and the existence and function of dialysis centers with adequate supplies, access, light, heat, water delivery systems, and transportation infrastructure are absolutely essential to life. Patients with chronic kidney disease have specific and critical needs regarding diet and medications. Disasters have shown us how tenuous our health care delivery systems may be, especially for patients with complex needs.

Social support and networks are associated with differential survival of patients with and without renal disease (2). Residence is also a critical but poorly studied factor, which probably affects outcomes in patients with ESRD (3). Heart-rending stories of parents and children separated by airlifting to ensure provision of dialysis services to patients, perhaps at the expense of disruption of critical emotional relationships, highlight the essential nature of such family and social networks.

Although Hurricane Katrina put these issues into stark focus recently, disasters that affect our patients can present in varied forms, including blackouts, floods, fires, tornadoes, earthquakes, explosions, and nuclear mishaps, as well as others that are perhaps too terrifying to contemplate but that must be faced. The American Society of Nephrology (ASN) previously responded to the earthquake in Armenia in 1988 by a public call for volunteers at our annual meeting, and several of our members participated in the response (4). In this issue of the Clinical Journal of the American Society of Nephrology, Kopp et al. (5,6) present an extraordinarily detailed but extremely pragmatic and highly necessary blueprint for the response of the many renal communities to disasters, engendered in part by the Katrina disaster, and its effects on patients with chronic kidney disease. Fukagawa (7) reviews the response of the Japanese community to crises associated with earthquakes, and Kenney (8) reports on responses of nephrologists to Katrina and outlines plans for the future. What can the various nephrology societies and organizations do to prepare for and enhance delivery of patient care in disasters in the future?

First and foremost, our organizations can provide education—as presented in this series—in journals, on web sites, through electronic mailings, and at annual and regional meetings to our members with different degrees, job descriptions, training, and expertise. Educational efforts can be preparatory or might deal with immediate circumstances. Such educational initiatives must therefore be crafted for delivery at diverse levels. Our constituent audience includes patients and their families, nephrologists, dialysis personnel, public health authorities, and policy planners, as well as municipal and state managers and planners and first responders. Different organizations with different missions, memberships, and structures can contribute to diffusing educational material in the right manner in various suitable venues.

The ASN has conducted two special programs on disasters since Hurricane Katrina struck. In 2005 during Renal Week in Philadelphia, Tomas Berl, MD, David G. Warnock, MD, and Robert Provenzano, MD, the presidents of the ASN, the National Kidney Foundation, and the Renal Physicians Association, moderated a special symposium, “Lessons Learned From Katrina,” in which speakers from the private and public sectors described their experiences with attempting to provide dialysis care with as little disruption as possible. Speakers included L. Lee Hamm, MD, Robert J. Kenney, MD, Patricia Philliber, BBA, of Network 13, Gina Clemons, MGA, of the Centers for Medicare and Medicaid Services, and Linda Lansing of DaVita, Inc. The session also included a wide-ranging discussion that focused on defining the scope of a disaster plan and appointing a working group to make recommendations to the renal community. In November 2006, President Thomas D. DuBose, Jr., MD, in coordination with the Kidney Community Emergency Response Coalition, invited a special presidential symposium on “Disasters and Nephrology: Lessons from Katrina,” chaired by Robert J. Alpern, MD, dean of the Yale University School of Medicine, and Sharon G. Adler, MD, of Harbor-University of California, Los Angeles Medical Center, which was held during

Published online ahead of print. Publication date available at www.cjasn.org.

The opinions expressed are those of the author and do not reflect policy of the American Society of Nephrology.

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ISSN: 1555-9041/204–0801
Renal Week in San Diego. Talks included “How to Prepare a Dialysis Unit for Providing Treatments during a Disaster” (Robert J. Kenney, MD), “The Volunteer Physician: How to Interact with Providers and Deliver Care” (Jeffrey B. Kopp, MD), “Disaster Outcomes: Follow-up of the Katrina Dialysis Patients” (Andrew J. Cohen, MD), and “Salvaging Academic Programs: Recovering Research Programs with Lost Reagents and Looming Deadlines” (Luis Gabriel Navar, PhD).

The ASN sent representatives (Sharon Adler, MD, Andrew Cohen, MD, Paul Kimmel, MD, and Jeffrey Kopp, MD) to a conference “The Kidney Community Emergency Response Coalition,” held in Washington, DC, in January 2006, in which many organizations that are concerned with the health and well-being of patients with kidney disease participated. This meeting was followed by other conferences and working groups on disaster planning in which ASN members participated. In addition, the ASN has collaborated closely with representatives from Network 6 to aid in planning and educational efforts, from shortly after Hurricane Katrina struck to the present.

Although Kopp et al. (5,6) suggest that societies develop an infrastructure to deal with national disasters and individual volunteer efforts are to be applauded and encouraged, a response on-site during Katrina was not possible because of the total breakdown of the fundamental services that were necessary for delivery of dialysis, including water and delivery systems, equipment, personnel, and transportation facilities. The Centers for Medicare and Medicaid Services, the Federal Emergency Management Agency, and the networks are urged to develop a disaster plan for the integrated care of patients at the nearest feasible and secure site near national disasters for the safe and coordinated provision of dialysis services in the event of another major disaster in the United States. With the availability of care, societies can notify their members that volunteers are needed and supply information on where to report and what provisions and supplies may be needed.

An extensive literature has been generated regarding the psychosocial consequences of disasters (9,10). Patients with ESRD may be particularly vulnerable because of medical as well as psychosocial factors. Disruption of social networks as well as medical infrastructures may have devastating consequences, by heightening the anxiety and depression that are common in dialysis populations (11). Much of the patient population with ESRD in the United States is composed of people from lower socioeconomic strata (12–14), who are likely less able to weather the exigencies of an unanticipated catastrophe that occurs in a life that is largely dependent on the activities and good will of others.

In addition to education, societies may assist in planning for disasters and ensure that planning will be a clear part of the mission of health care providers. In particular, nephrologists and especially medical directors of dialysis units need to work in partnership with dialysis provider companies to ensure that each unit has an emergency response plan. Dialysis provider companies need to work together to coordinate provision of dialysis within regions and in cooperation with regional networks.

Disclosures
None.

References